

CLAIMS

What is claimed is:

- 5 1. A toothbrush apparatus comprising: a head with bristles, a neck and a handle, and an
eccentrically rotational weight engaged for rotation with a motor, the weight
disposed within the head adjacent the bristles, the motor disposed within the handle;
the head, neck integrally formed; the head, neck and weight having a natural
10 resonance frequency of vibration approximately matched to the rotational speed of
the motor.
2. The apparatus of claim 1 wherein the motor is operated electrically.
3. The apparatus of claim 1 wherein the motor is engaged with the eccentrically
rotational weight by a flexible drive shaft extensive within the neck.
- 15 4. The apparatus of claim 3 wherein the motor is joined to the drive shaft by a flexible
coupling.
5. The apparatus of claim 3 wherein the drive shaft terminates within an anchor
bearing, the anchor bearing engaged with the head.
6. The apparatus of claim 1 wherein the bristles are mounted in a removable brush.
7. The apparatus of claim 6 wherein the removable brush is attached to the head by a
20 sliding engagement means.
8. The apparatus of claim 7 wherein the sliding engagement means comprises a first
and second mutually joinable engagement elements.
9. The apparatus of claim 7 wherein the removable brush provides a tab.
10. The apparatus of claim 9 wherein the neck provides a tab receiver engagable with the
25 tab of the removable brush for securement of the removable brush on the head.
11. The apparatus of claim 3 wherein a center of mass of the head is laterally offset from
the drive shaft and wherein the neck and head are flexible so as to oscillate in
synchronized rotational motion about the longitudinal axis as the rotational weight
rotates.

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